

Claim 1 (Amended Once)

1. Apparatus for sensing characteristics of regions at and under a seafloor, comprising:

an array comprising a plurality of transducers that each can generate a sonic beam, and at least one sonic detector that can detect sound;

circuitry connected to said plurality of transducers to energize them one at a time with an electrical pulse to generate a narrow sonic beam, said circuitry connected to said at least one detector to receive signals representing a sonic echo of each sonic beam;

said plurality of transducers being arranged in at least one row and each of said pulses has a carrier frequency of at least 200 kHz and modulated by a frequency less than said carrier frequency to generate a narrow sonic beam.

Claim 9 (Amended Once)

9. The apparatus described in claim 8 wherein:

said circuitry is constructed to energize said transducers with a carrier frequency of at least about 200 kHz, said transducers are spaced apart by at least about 3.5 cm and no more than 25 cm, and said at least three detectors include a detector lying adjacent to each transducer.

REMARKS

Applicant has cancelled claims 6-7 and 10-13 and amended claims 1 and 9. Accordingly, only claims 1-5 and 8-9 remain in the application, all of which are in applicant's elected invention I. None of the claims were allowed.

Claim 1, which has been amended, describes apparatus for sensing characteristics at a seafloor, which includes a plurality of transducers that can each generate a sonic beam, and at least one sonic detector. Circuitry for energizing the transducers one at a time, energizes a transducer with pulses of the type shown in Fig. 4, with a carrier frequency of at least 200 kHz modulated by a frequency less than the